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CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER GREENE, DANIEL LAWSON	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/856,816
Filing Date: August 06, 2001
Appellant(s): WILBUER ET AL.

Karen A. LeCuyer
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/8/2005 appealing from the Office action
mailed 7/7/2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The Examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 38-58 are pending in the application. Claims 38-43 and 45-47 stand rejected. Claims 44 and 48-58 are withdrawn from consideration. Claims 1-37 have been cancelled. Claims 38-43 and 45-47 as they stand, are set forth in Appendix VIII.

This appeal involves claims 38-43 and 45-47 as evidenced by section 3 of the Appeal Brief filed 5/5/2005, section 6 on page 4 and the supporting arguments on behalf of claims 45 and 47 contained within section C., page 13 of the instant Appeal Brief filed 9/8/2005.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the Examiner in the rejection of the claims under appeal.

(9) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the Examiner in the Related Appeals and Interferences section of this Examiner's answer.

(10) References of Record

4,238,299	Wang	12-1980
5,372,701	Gerdon et al.	12-1994
5,732,701	Planchamp	9-1989

Boron: Definition and Much More from Answers.com available @
<http://www.answers.com/boron>, last accessed 11/08/2005 (cited as evidence of the electrical conductivity of boron)

(11) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 38-43 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (4,238,299).

Wang discloses Appellant's inventive concept (See column 3, lines 10-50).

A process for producing a neutron absorption coating on a shielding element.

The process comprising: providing a shielding element (18)(stainless steel) base material having predefined surfaces; providing a dispersion bath having a first

substance (26)(boron carbide) having a high neutron capture cross-section and a second substance (24)(copper) being an electrolytically precipitable metal and the first substance (26) in the form of an electrically conductive compound (i.e., copper/boron carbide). Note that the only difference between Appellant's example (see page 10) is the materials used. While Wang does identify the boron carbide as being electrically non-conductive when combined with the copper ions the boron carbide in question is electrically conductive as is evident when the shielding element (18) is exposed to the dispersion bath (copper/boron carbide). One can clearly see via figures 1 and 2a-2d that via gravity the shielding surface (18) is coated with the copper/boron carbide. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Additionally note that Wang discloses that dispersion bath is intermittently mixed. That is the boron carbide is added slowly over a period of time while mixing the bath, stopping the stirring allowing the boron carbide particles to settle and then introducing more boron carbide and repeating the process.

After completion of the coating process the shielding material (18) is then removed from the apparatus of Wang where it is repositioned so as to repeat the process on another side of the shielding material (18).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38-43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) in view of Gerdon et al (5,372,701), Planchamp (4,865,645) and the admitted prior art (see page 7).

As set forth above Wang discloses Appellant's inventive concept; however, if not apparent that cadmium can be utilized as the second substance electrolytically precipitable material then Gerdon teaches commonly known electroplating materials such as nickel, copper and cadmium in the electroplating art. With regard to the use of europium as the high neutron capture cross-section material Planchamp teaches commonly known materials having high neutron capture cross-section (i.e., cadmium, boron, europium, hafnium, gadolinium, samarium and dysprosium) in the nuclear radiation absorber art.

In regard to the material having a high neutron capture cross-section with an augmented neutron capture cross-section Appellant admits that is known fact Boron-11 and Boron-10 possess different neutron capture cross-sections. Boron-11 being 80.1 in atomic percent abundance and Boron-10 being 19.9 in atomic

percent abundance. Clearly any boron material selected will have and augmented neutron capture cross-section.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted known electroplating materials and high neutron capture cross-section materials, based on the conventional knowledge within the art. In the case of both materials selection can be based on cost, toxicity, etc.. Absorption efficiency is a determining factor in election of the neutron absorber material. Clearly, one skilled in the art would utilize the best materials available based on the determining factors above.

Claims 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) as applied to claims 38-43 and 46 above, and further in view of Weinberg (3,411,999).

As set forth above Wang discloses Appellant's inventive concept; however, Wang does not disclose the use of a glass vessel or the use of ultrasound as the mixing medium for the dispersion bath. Weinberg teaches the use of a glass vessel and ultrasound as the mixing medium in the electrolytic art (see entire document).

Modification of Wang to have include the vessel construction and mixing teachings of Weinberg would have been obvious to one having ordinary skill in the art at the time the invention was made as such results are in no more than the use of conventionally known equivalents within electroplating art as is evident by the teachings of Weinberg.

(12) Response to Argument

A. Claims 38-43 and 46 rejected under 35 U.S.C. 102(b) as being anticipated by Wang (4,238,299).

Appellant argues that Wang is essentially missing three elements that fail to allow Wang to anticipate the claimed invention.

The FIRST alleged missing element is “relative motion” during the coating process.

Appellant argues that the dispersion bath of Wang does not provide a relative movement of the dispersion particles during the coating process.

Appellant further argues that there is no movement of the surface to be coated during “the coating process”.

Review of the claims shows no indication of prescribed order or amount of time required for “the coating process”. That is no time or sequence of events is associated with the claim language “during the coating process”. The claims do not specify sequential steps required to exercise the process. As broadly interpreted Wang sets forth a process wherein the dispersion liquid containing the coating material is intermittently stirred during the coating process. Neither the claims nor the specification clearly set forth any specific definition of “the coating process”, hence the limitation given its broadest reasonable interpretation, can be interpreted to read on the entire process of Wang, as well as any portion therewithin that also can be understood to mean, “the coating process”. Appellant's claim language does not preclude the process of Wang

from reading on the claimed process. Appellant's claim language "during the coating process" does not mean coating takes place only during the relative movement of the dispersion material. While this may be Appellant's intent, the current claim language supports more than one interpretation.

Again it is noted that the features upon which Appellant relies (i.e., time, sequence of events, etc associated with the coating process) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to Appellant's arguments (see pages 8 and 9) that no relative movement of the surface is present "during the coating process" in Wang the Examiner disagrees. Again, the Examiner interprets "coating process" as applying to the entire process of coating a material on a substrate and not only on the "instant of adherence" of said material on said substrate. Movement takes place by the dispersion material contacting the surface of the material to be exposed. That is the claim language reads on the flowing of the dispersion material against the surface to be coated and this movement cannot be prevented. Thus relative movement takes place at the material surface. Appellant labeled this movement as "local movement", however no matter what one wishes to call this movement, it is still considered and reads on "relative movement". Here again, Appellant is reading features into his claims that are not claimed, i.e. "macroscopic phenomenon".

The SECOND alleged missing element is “a dispersion bath during coating”. The limitation “during the coating process” has been addressed above and Wang clearly sets up a dispersion bath during the coating process as explained in section 11 above.

The THIRD alleged missing element is “a first substance in the form of an electrically conductive compound”.

Claim 40 clearly discloses that the first substance is at least one of the elements of the group consisting of boron, gadolinium, cadmium, etc. The fact that this claim says the first substance is at least one of, means it can be only one of, i.e. the first substance can be only boron, which reads on Wang. Wang cannot be properly precluded from reading on claim 38 because claim 40 is evidence that boron alone (and therefore Wang) read on the claim language.

Appellant's arguments that Wang's boron carbide becomes electrically conductive only after the copper coating is formed is irrelevant because of Appellant's own admission in claim 40 that boron alone is electrically conductive.

Claim 40 discloses boron, the specification page 6, third paragraph discloses boron carbide, both of these limitations read on Wang, otherwise it appears Appellant is arguing a non-operative embodiment by saying that boron is not an electrically conductive compound.

Since the term “electrically conductive” is not defined in the claim and the specification page 6, third paragraph only discloses “good conductivity means good electrolysis control”, the limitation “electrically conductive compound” reads

on the boron carbide disclosed in Wang. It is noted that no level of resistivity or amount of current flow for a given voltage has been given to determine what makes a compound electrically conductive or what appellant actually considers "electrically conductive". It is considered that every substance has an electrically conductive property and that any substance whose electrically conductive property is greater than zero reads on the claim. However according to Answers.com, Boron does indeed have an electrical resistivity of (20 °C) $1.5 \times 10^4 \Omega m$, hence boron is considered electrically conductive and thus Wang reads on the claim.

B. Claims 38-43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) in view of Gerdon et al (5,372,701), Planchamp (4,865,645) and the admitted prior art (see page 7).

Appellant argues Wang does not disclose three essential elements of the claims, however the alleged three missing elements of Wang have been explained in section 12 A. above.

In response to Appellant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941

(Fed. Cir. 1992). In this case, admitted prior art, Gerdon and Planchamp clearly teach commonly known materials having high neutron capture cross section, i.e. these materials are well within the knowledge generally available to one of ordinary skill in the neutron absorber art. It is immaterial whether the material is conductive or not, the conductivity is not the issue in the Wang, patent, the neutron capture capability is.

C. Claims 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ('299) as applied to claims 38-43 and 46 above, and further in view of Weinberg (3,411,999).

Appellant only argues that Wang allegedly does not contain the three elements discussed and explained in detail in section 12 A above. Since these issues have already been addressed in said section 12 A above, no further comment is necessary.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel Lawson Greene Jr.

 4/9/05
Conferees:

Ricardo Palabrica 

Jack Keith (SPE 3663) 

JACK KEITH
SUPERVISORY PATENT EXAMINER